

Remarks

Claims 1-12 are pending in the application. Claims 1-12 have been rejected under 35 U.S.C. § 103(a) on various grounds. In view of the following remarks, reconsideration and withdrawal of these grounds of rejection is requested.

Drawings

Figure 1(b) stands objected to under 37 CFR 1.84(p) as including a reference to inlet "108" not referenced in the specification. Paragraph [00015] of the specification was amended in the Amendment filed December 2, 2004 to change the reference "118" to "108." By this Amendment, paragraphs [00016] and [00017] are similarly amended. Accordingly, reconsideration and withdrawal of this objection is respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-3, 5-7 and 9 stand rejected under 35 U.S.C. § 103(a) as being obvious over Akino (U.S. Pat. No. 6,148,089) in view Applicant's Prior Art Figures 1(a) and 1(b) (hereinafter the "Applicant's Prior Art Figures"). For the reasons set forth below, reconsideration and withdrawal of this ground of rejection is respectfully requested.

Claim 1 recites:

A microphone enclosure comprising: a casing for containing a microphone for receiving sound and converting said sound into at least one electrical signal; and at least one inlet for allowing sound to reach said microphone; said at least one inlet having a plurality of openings forming at least one tortuous path therein, wherein said microphone is disposed between said at least one inlet and a wall

of the casing such that sound can only impinge upon the microphone by traveling through said at least one inlet. [emphasis added].

Thus, claim 1 requires a microphone enclosure with at least one inlet having a “plurality of openings” forming a “tortuous path,” such that sound must travel through one or more of the plurality of openings to impinge upon the microphone. The “tortuous path” prevents the microphone from being easily damaged by a wire or similar means, and ensures that particles do not become lodged in the inlet (see, page 5, paragraph [0021] of the specification).

Applicant’s Prior Art Figures actually ‘teach away’ from a microphone enclosure which includes an inlet with a “plurality of openings” forming a “tortuous path.” Particularly, Figure 1(b) of the present application specifically shows a single non-tortuous inlet 108 (emphasis added), while claim 1 requires a “plurality of openings” forming a “tortuous path.”

A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant...[or] if it suggests that the line of development flowing from the reference’s disclosure is unlikely to be productive of the result sought by the applicant. See, Tec Air, Inc. v. Denso Manufacturing Michigan Inc., 192 F.3d 1353 (Fed. Cir. 1999). Moreover, if when combined, the references would produce an inoperative device, then they teach away from the combination. Id.

Starting with the disclosure of Akino, one of ordinary skill in the art would certainly not be motivated to modify Akino to dispose the microphone unit (2) of Akino between a single non-tortuous inlet (i.e., inlet 108 in Figure 1(b)) and a wall of the casing which contains the

microphone unit. Specifically, Akino discloses a microphone unit 2 which is unobstructed at its front acoustic terminal 21, and to enclose the microphone unit as shown in Figure 1(b) of the present application would be to obstruct that front acoustic terminal, and thus make the microphone at least partially inoperative. Additionally, if the microphone unit 2 of Akino were so enclosed, the rear acoustic terminal 22 would be rendered inoperative, as there would be no direct way for sound to impinge upon the rear acoustic terminal. As noted above, a combination of references which results in an inoperative device cannot form the basis for an obviousness rejection.

Furthermore, the Examiner has failed to establish that it would have been obvious to one of ordinary skill in the art to combine Applicant's Prior Art Figures with Akino, or that such a combination would fall within the parameters of claim 1.

To establish a prima facie case of obviousness, three basic criteria must be met: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings, (2) there must be a reasonable expectation of success, and (3) the prior art reference (or references when combined) must teach or suggest all the claim limitations. See, M.P.E.P. 2142 (Eighth Edition, Feb. 2003).

As a threshold matter, there must be some teaching, suggestion or motivation in the prior art to make the specific change made by the applicant. In re Dance, 160 F.3d 1339, 1343 (Fed. Cir. 1998). Obviousness should be measured "at the time the invention was made" (i.e. the filing date of the application), and with no prior knowledge of the applicant's disclosure. In re

Dembiczak, 175 F.3d 994, 998-999 (Fed. Cir. 1999).

Obviousness cannot be established by hindsight combination to produce the claimed invention. In re Dance, 160 F.3d. at 1343. The Examiner must show reasons why the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the prior art references for combination in the manner claimed. In re Rouffet, 149 F.3d 1350, 1357 (Fed. Cir. 1998).

In the present case, the Examiner has failed to identify a motivation, teaching or suggestion in either the Applicant's Prior Art Figures or Akino which would have lead one of ordinary skill in the art to combine them.

Even if, arguendo, the Examiner could establish a motivation to combine, the Examiner has failed to specify how the combination of these references would provide an operative microphone enclosure which includes an inlet with a "plurality of openings" forming a "tortuous path."

As noted above, Applicant's Prior Art Figures show a microphone enclosure with a single non-tortuous inlet 108. Akino shows a plurality of acoustic terminals 4 leading to a microphone unit 2, but fails to disclose, teach or suggest a "tortuous path" to the microphone, or a microphone disposed between "at least one inlet and [the] wall of [a] casing" so that sound can only impinge upon the microphone by traveling through the at least one inlet. As argued above, sound impinges directly upon the front acoustic terminal 21 of the microphone 2 of Akino without traveling through any "inlet." Therefore, if Akino and Applicant's Prior Art Figures were combined, the resulting device would not meet all the limitations of claim 1 (i.e., the

combination will not meet both the limitations of an inlet with a “plurality of openings” forming a “tortuous path” and a microphone “disposed between said at least one inlet and a wall of the casing such that sound can only impinge upon the microphone by traveling through said at least one inlet”). Thus, reconsideration and withdrawal of this ground of rejection with respect to claims 1- 5 is respectfully requested.

Independent claim 6 contains similar limitation to those discussed above with reference to claim 1. In particular, claim 6 requires “at least one inlet formed by a convergence of [a] first opening and [a] second opening for allowing sound to impinge upon said microphone” and a microphone “disposed between said at least one inlet and a wall of the casing such that sound can only impinge upon the microphone by traveling through said at least one inlet.” Accordingly, for at least those reasons discussed above with reference to claim 1, reconsideration and withdrawal of this ground of rejection with respect to claims 6, 7 and 9 is respectfully requested.

Claims 4 and 8 stand rejected under 35 U.S.C. § 103(a) as being obvious over Akino in view of Applicant’s Prior Art Figures, and further in view of Hood et al. (U.S. App. No. 2003/0072131). For the reasons set forth below, reconsideration and withdrawal of this ground of rejection is respectfully requested.

As discussed above, neither Akino nor Applicant’s Prior Art Figures disclose, teach or suggest “at least one inlet for allowing sound to reach said microphone...having a plurality of openings forming at least one tortuous path therein” and a microphone “disposed between said at least one inlet and a wall of the casing such that sound can only impinge upon the microphone by traveling through said at least one inlet.” Hood also fails to disclose, teach or suggest such an

invention.

Hood teaches a computer system 100 including antennae 164, 174. Hood fails to disclose, teach or suggest “at least one inlet for allowing sound to reach said microphone...having a plurality of openings forming at least one tortuous path therein” and a microphone “disposed between said at least one inlet and a wall of the casing such that sound can only impinge upon the microphone by traveling through said at least one inlet.” Hence, for at least those reasons discussed above with reference to claims 1 and 6, reconsideration and withdrawal of this ground of rejection with respect to claims 4 and 8 is respectfully requested.

Claims 10-12 stand rejected under 35 U.S.C. § 103(a) as being obvious over Takahashi et al. (U.S. Pat. No. 6,525,854) in view of Akino and Applicant's Prior Art Figures. For the reasons set forth below, reconsideration and withdrawal of this ground of rejection is respectfully requested.

As discussed above, neither Akino nor Applicant's Prior Art Figures disclose, teach or suggest “at least one inlet for allowing sound to reach said microphone...having a plurality of openings forming at least one tortuous path therein” and a microphone “disposed between said at least one inlet and a wall of the casing such that sound can only impinge upon the microphone by traveling through said at least one inlet.” Takahashi also fails to disclose, teach or suggest such an invention.

Takahashi teaches a portable radio terminal including an antenna 1, a radio transmission-reception section 2, a modulation-demodulation section 3, a coder-decoder 4, a microphone 5 and a speaker (See Fig. 1). Takahashi does not disclose, teach or suggest “at least one inlet for

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allowing sound to reach said microphone...having a plurality of openings forming at least one tortuous path therein” and a microphone “disposed between said at least one inlet and a wall of the casing such that sound can only impinge upon the microphone by traveling through said at least one inlet.” Therefore, for at least those reasons discussed above with reference to claims 1 and 6, reconsideration and withdrawal of this ground of rejection with respect to claims 10-12 is respectfully requested.

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Conclusion

In view of the foregoing remarks, Applicants submit that this application is in condition for allowance at an early date, which action is earnestly solicited.

Respectfully submitted,



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